November 1986

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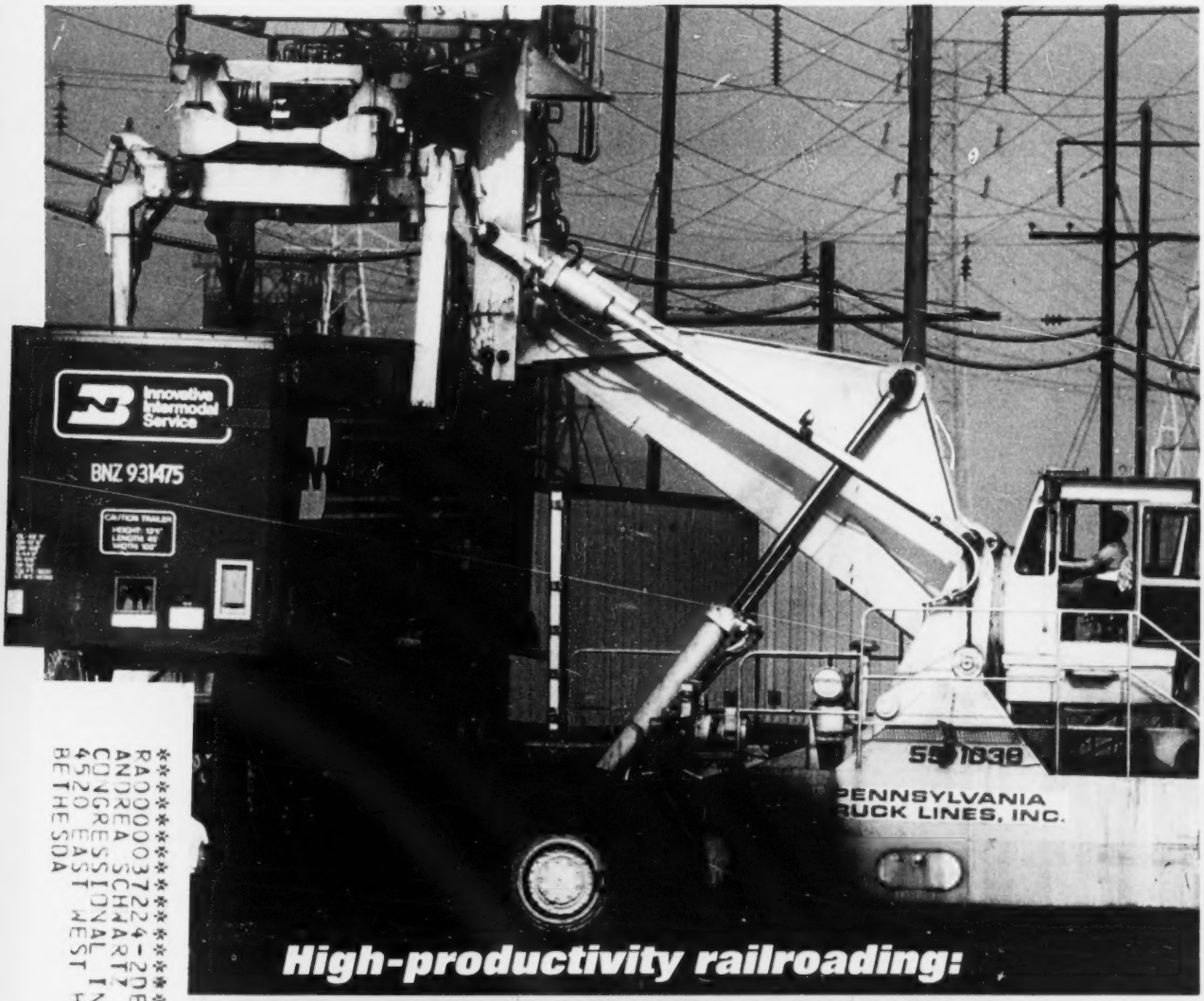
...for the new age of railways



High-productivity railroading:

Boosting intermodal terminal efficiency

12 guideposts on the road to short line success

How New York MTA plans to spend $8 billion

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Railway Age
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November 1986

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Conrail's Kearny, N.J. intermodal yard photographed by Kent Patterson.

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Market Outlook

Equipment

Novacor Chemicals Ltd.: Has installed four W. R. Stamler Corp. railroad car spotters at its polyethylene production plant in Joffre, Alta. The car spotters automatically position hopper cars of various sizes in Novacor's washing and loading operations. Two car spotters, mounted on the same track, push cars into and out of a wash building; the two other car spotters then position car strings in two separate gravity loading operations.

PATH: Awarded a $1,042,000 contract to TLT-Babcock, Inc., for the design and supply of tunnel ventilation fans for a new tunnel emergency ventilation building in Jersey City.

Pullman Leasing Co.: Is taking delivery of 200 5,850-cubic-foot-capacity covered hopper cars for plastic resin service. The cars feature a fully-rounded roof line silhouette, which increases strength while it eliminates carlines and permits unobstructed clearance in loading with a centrifugal spreader; the cars are also equipped with a new venting system, a new plastic hatch cover utilizing PL's simplified Sur-Latch, and a newly-designed Micro-Matic discharge gate.

Southeastern Pennsylvania Transportation Authority: Has invited bids, due Dec. 19, for the supply of 26 A.C.-propulsion cars for service on SEPTA's Philadelphia & Western line. SEPTA has budgeted $25 million for the program. Bids are expected from builders in Europe, Canada, and Japan.

Facilities

Chicago & North Western: Global One, C&NW's $33-million double-stack container handling facility on Chicago's west side, is scheduled for completion in December. Financing of the facility was arranged by the CIT Group/Capital Financing, an operating company of the CIT Group, which is a subsidiary of Manufacturers Hanover Corp.

Kawasaki & Nissho Iwai: Conducted the grand opening Oct. 22 of a new railcar manufacturing facility at the Port Authority Industrial Park, Yonkers, N.Y., where 95 cars are being assembled for PATH. The 150,000-square-foot facility employs 150 people, including workers from the Otis Elevator plant that formerly occupied the site.

Revenue freight carloadings

Commodity	Oct. 11 week	Oct. 4 week	Sept. 27 week	Sept. 20 week
Grain	29,950	30,079	28,661	30,179
Other farm products	4,649	3,896	3,518	3,786
Metallic ores	16,148	14,024	16,665	14,208
Coal	108,720	111,761	114,816	116,684
Crushed stone, gravel and sand	14,054	14,644	15,131	15,240
Nonmetallic minerals	8,273	8,912	8,356	9,837
Grain mill products	11,379	10,555	10,448	10,890
Food and kindred products	11,344	11,372	11,265	11,128
Primary forest products	10,275	10,424	10,497	10,479
Lumber and wood products except furniture	7,539	7,872	8,430	8,063
Pulp, paper and allied products	12,371	12,273	12,037	12,372
Chemicals and allied products	22,723	23,954	24,298	25,103
Petroleum products	4,807	4,401	4,544	4,473
Stone, clay and glass products	10,339	10,369	10,913	10,699
Coke	3,726	4,066	3,939	3,572
Metals and products	7,428	7,920	8,055	7,223
Motor vehicles and equipment	19,540	20,192	20,390	20,401
Waste and scrap materials	7,689	7,597	7,929	8,164
Forwarder and shipper assn. traffic	3,375	3,899	3,650	3,389
All other carloads	73,819	74,189	72,900	72,628
LCL traffic	121	117	120	111
Total Cars Loaded	**388,269**	**392,516**	**396,562**	**398,629**
% change from previous year	(1.6)	(0.6)	0.0*	0.0*
Estimated revenue ton-miles (billions)	17.2	17.6	17.7	17.7
% change from previous year	0.1	1.5	5.8	3.0

Total:	**1986**	**1985**	**% change**
41 weeks	694.2	694.3	(0.0)*

*Difference is less than 0.01%

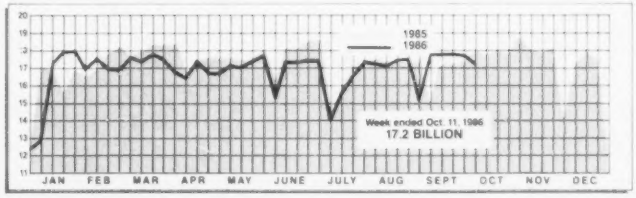
Piggyback loadings

	Oct. 4 week	Sept. 27 week	Sept. 20 week	Sept. 13 week
Trailers/containers	105,159	106,007	105,286	101,715

Cumulative total, 40 weeks		**% change from 1985**
Trailers/containers	3,800,225	9.0

Rail freight traffic trends

Billion ton-miles (Estimated)



Source: Association of American Railroads

Freight cars

	DELIVERED			ORDERED			ON ORDER AND UNDELIVERED		
	September	9 months		September	9 months		Oct. 1,	Average Backlog	
	1986	1986	1985	1986	1986	1985	1986	1986	1985
Built new by carbuilders	1,134	7,536	8,666	1,096	9,441	6,855	3,664	3,640	3,906
Built new in RR shops	0	0	406	0	0	0	0	0	0
Built new—total	**1,134**	**7,536**	**9,072**	**1,096**	**9,441**	**6,855**	**3,664**	**3,640**	**3,906**
Rebuilt	25	75	0	0	75	0	0	0	0
TOTAL	**1,159**	**7,611**	**9,072**	**1,096**	**9,516**	**6,855**	**3,664**	**3,640**	**3,906**
Locomotives (new and rebuilt)	Not available at press time								

Source: American Railway Car Institute

C&NW supervisors: "Leaders of men—not policemen"

It should come as small surprise to anyone, to learn that the traditional, time-honored railroad discipline system is perhaps the greatest cause of friction between employee and supervisor, between union representative and manager. Traditional and time-honored, the system may be. It is also out-of-date and out-of-step, not always effective and sometimes unfair.

GUS WELTY

But, recognizing these things and doing something about them are not the same. Chicago & North Western last year did both, and thus far, the results are looking good.

C&NW's principal officer is the son of the late Doc Wolfe, who truly deserved the adjective "legendary" in front of his name for his years as the railroad industry's chief labor negotiator. Jim Wolfe is himself a former vice president-labor relations at North Western. The incumbent, Ron Kuchna, has a tough act to follow; it's always tough when your boss once held the job you hold, especially when times have changed some since he held it.

But never mind that. A year and a half or more ago, C&NW decided to change the way it was managed, in ways that would let managers be managers. There was a need, of course, to convince employees that this was a serious effort to upgrade the way the railroad was run, to the benefit of everybody cashing a paycheck.

There were those in management, especially J.A. Zito, senior vice president-operating, as well as a lot of people in the labor organizations, who thought that there had to be a better way of handling discipline. What they were saying was that the existing system was destructive, that it was killing initiative, that it had created an atmosphere of fear, that it involved punishments that didn't always fit the crimes. The system was rigid, allowing for little or no discretion in its application: An employee with a 20-year record of good performance could make an error in judgment, an honest mistake, and get set down for 15 or 30 or 45 or 60 days.

Here's a guy suddenly sitting at home. The neighbors ask him if he's on vacation. He tells them, as he's told his wife and kids, that he's been suspended. And they all say, Hey, you've been telling us what a great company you work for, and they do this to you? C'mon.

So, then, maybe, the employee's kids don't wear their C&NW baseball caps anymore, and the employee and his wife don't go shopping in their C&NW jackets anymore, and maybe the employee and his family don't say as much as they used to about the company; or maybe if they do say something, it's something different.

North Western didn't change because it's soft on sob-stories, or because management has suddenly been taken over by bleeding-heart, flaming liberals.

North Western changed because it made sense to change.

North Western still has tough discipline where it has to be tough, for example, in cases involving such things as Rule G, insubordination, that sort of thing. It is tough on repeat offenders, on those people—a tiny percentage, Jim Wolfe says—who simply will not obey the rules. But it allows managers discretion, the discretion that allows them to get rid of the bad actors while it also allows them to counsel and if necessary warn employees whose errors are rare and not all that serious.

North Western's program has been in effect only since July 1985, so there's little more than a year to judge it by. Everyone feels it has helped safety and morale. And managers have more time to manage because they're having to spend less time preparing for and then conducting the formal investigations that are the hand-maiden to traditional discipline procedures. In the year before the new policy went into effect, C&NW officers held about 2,400 formal investigations. In the year after, the total dropped to about 150.

Predictably, there were problems. Union officers, used to the old, adversarial ways, figured that management had something, unseen and unknown but dangerous, up its sleeve. Kuchna and other top C&NW people bared their arms, and the union reps have not complained since. As for supervisors, Zito told them their role in the company was to be leaders of men, not policemen. Old habits are hard to break, and the old ways of discipline were deeply ingrained. But, Zito firmly believes that first-line supervision has accepted what it is that top management wants to do.

But what North Western has done had to be done, by somebody. Just about everything else in railroading has changed. Discipline procedures, and policies, had to, too. In that area, common sense and fairness demand no less, and C&NW has apparently met the demands.

Class 1 railroad employment

Employee Group	No. of employees, mid-month count Sept. 1986	Percent of change July 1986 from Sept. 1985	Aug. 1986
Total—all employees	273,923	d 8.47	d 1.58
Executives, officials and staff assistants	12,995	d 3.67	d 2.19
Professional and administrative	49,260	d 12.21	d 1.15
Maintenance of way and structures	59,894	d 6.50	d 2.99
Maintenance of equipment and stores	50,195	d 7.90	d .41
Transportation (other than train and engine)	18,133	d 7.48	d 1.57
Transportation (train and engine)	83,446	d 8.80	d 1.41

Source: ICC

New billions for NYCTA

New York MTA's $8.3-billion 1987-91 capital program includes $6.5 billion for the city's transit system—welcome news for long-suffering straphangers and business-hungry suppliers.

By LUTHER S. MILLER, Editor

Over the next five years, New York's Metropolitan Transportation Authority proposes to spend an average of $4.5 million a day—weekdays, weekends, and holidays—on capital improvements to its public transit system. It adds up to $8.3 billion, and nearly all of it will go toward improving MTA's vast network of rapid transit and commuter trains, one of the world's biggest and busiest.

This is good news, of course, for the millions of New Yorkers and suburbanites who rely on the trains of the New York City Transit Authority (NYCTA) and the Long Island and Metro-North commuter railroads for transportation, primarily to and from jobs in Manhattan.

It is also good news for railroad suppliers, who have become more and more dependent on the rail transit segment of the marketplace as traditional sources of business have shrunk. New York's new five-year capital program, which follows one of equal magnitude that is still keeping production lines humming, is equivalent in dollar outlays to two years of capital spending by all of the nation's freight railroads. Not all railroad suppliers will get a piece of the New York action, but many of them will. "A railroad is a railroad, whether it runs over the prairies or under the sidewalks of New York," observes one signal supplier who estimates that the rail passenger market (transit, commuter, and Amtrak) now produces about twice as much signaling business as the Class I freight roads.

New York City Transit Authority
1987-1991 Capital Program

($ Millions)

	COMMITMENT YEAR					
CATEGORY	1987	1988	1989	1990	1991	TOTAL
Cars	$280.3	$0.0	$0.0	$0.0	$0.0	$280.3
Car Rehab	411.9	347.2	243.6	38.1	34.4	1075.2
Buses	42.8	32.5	29.5	31.0	61.0	196.8
Stations	42.4	155.8	72.7	125.5	54.5	450.9
Track	195.7	96.1	166.1	139.4	108.0	705.3
Line Equipment	80.7	49.7	86.7	64.8	73.4	355.3
Line Structures	63.0	68.1	133.5	83.9	102.2	450.7
Signals & Comm	72.5	165.6	190.7	152.7	93.9	675.6
Power	65.2	73.2	103.0	62.5	42.6	346.5
Shops	46.3	106.6	108.2	50.2	12.8	324.1
Yards	15.8	24.1	99.5	95.3	84.6	319.3
Depots	124.1	183.4	102.5	66.2	76.7	552.9
Service Vehicles	14.9	9.2	7.7	5.2	0.0	37.0
Security	8.9	0.0	0.0	0.0	0.0	8.9
New Routes	32.0	13.3	0.0	25.0	0.0	70.3
Miscellaneous	101.5	88.0	94.0	118.3	173.6	575.4
SIRTOA	36.6	11.1	6.3	4.6	2.4	61.0
TOTAL	$1,634.6	$1,424.1	$1,444.6	$1,062.7	$920.1	$6,485.5

• **Big bucks for NYCTA.** The New York City Transit Authority, which carries three-quarters of the 6.4 million riders that MTA moves on an average weekday, will get nearly $6.5 billion under the new five-year plan (provided the New York Legislature, as expected, approves it this month).

NYCTA's biggest single expenditure will be for rolling stock—more than $1 billion for overhauling older cars in the existing fleet, completing a rehabilitation program that was started under the prior program and is now about half-way finished; and $280.3 million for new cars. NYCTA is expected to move quickly, once funding is assured, to order 200 additional R-68 cars from Westinghouse-Amrail, on top of the 400 already ordered from that French-American joint venture. (Altogether, NYCTA ordered 1,575 new cars during the 1982-1986 program, and these are now being delivered.)

During the life of the 1987-1991 program, which will begin officially Jan. 1, NYCTA will begin work on a new generation of advanced technology (e.g., A.C. propulsion) cars. The plan is to have three suppliers each produce an eight-car trainset of prototypes by thoroughly rehabilitating and installing new equipment on older NYCTA cars. An initial meeting with prospective contractors has already been held. Enthusiasm among suppliers for the way NYCTA proposes to proceed is not universal. One who has decided not to enter the contest complains that the $235,000 per car that NYCTA will make available for the project is too little. But the long-term stakes are sufficiently attractive—ongoing orders for an estimated 200 or more cars a year—that the project is likely to find no shortage of takers among bigger companies that can afford the risk, especially those based in countries with strong export policies.

While buses won't be short-changed, they will require only a modest share of total equipment expenditures, around $197 million.

About 39% of NYCTA's outlays will be for infrastructure improvements. Major rehabilitation is planned for the Lexington Avenue, 8th Avenue (south of 59th Street), Broadway/7th Avenue, Broadway/Jamaica, and Myrtle, Astoria, Concourse and Brighton lines.

For signals and communications, more than $675 million is budgeted over the five-year period.

Station improvements will be another big-ticket item, adding up to $451 million. An automatic fare collection program, now under pilot test at 80 control areas, will go into system-wide design and construction during the new program.

Shops and yards will get a total of $872 million. Major rehabilitation is scheduled for the 207th Street overhaul shop and the East New York and Pitkin maintenance shops. There's money for yard expansion,

NYCTA's new cars (like this Kawasaki R-62 operating on the IRT Lexington Avenue line) are averaging 50,000 miles between failures, compared with 10,000 miles for the cars they replaced.

but few plans at this time due to lack of space at existing facilities. Until new yard locations can be identified, NYCTA acknowledges, some new and overhauled cars will probably have to be stored on the right-of-way.

Only $70 million is allocated for new routes, but it's a key allocation because it will go primarily to complete projects that have long been stalled. It calls for the completion in 1987 of NYCTA's Archer Avenue extension, and in 1988 of the controversial 63rd Street tunnel. There's also a $25 million item in the budget for design work on a proposed new tunnel in Queens.

• **Back from the brink.** The story behind this massive, ongoing program is vividly capsulized in a just-published MTA document that describes the challenge, the response so far, and what remains to be done:

"Every weekday morning, public transportation gets 83% of the work force to their jobs in the region's hub. The Metropolitan Transportation Authority—parent company of the New York City Transit Authority, Long Island Rail Road, and Metro-North Commuter Railroad—carries most of these people. In fact, the MTA moves two-thirds of the nation's rail commuters.

"Yet, in the years when the metropolitan region was solidifying its position as the nation's center of finance, culture, and tourism, its mass transit network chronically received less than 30% of the capital needed to keep it running. By 1980 the system was in a state of desperate disrepair.

"That year, newspapers reported that a third of the city's subway cars were out of service. In 1981, the TA's car fleet averaged only 6,640 miles between breakdowns—compared with about 35,000 miles in the mid-1960s. Equipment on the commuter railroads that run east and north from the city was often little better. A commuter council claimed that on-time performance on the Upper Harlem averaged 68% in the morning rush. On the LIRR, air conditioning failed so often that conductors were issued door wedges to help ventilate moving cars.

"In 1981 the New York State Legislature declared a 'transportation emergency,' and approved the MTA's first five-year capital program. Although the Legislature recognized that the system's needs were 'far in excess of the funds being authorized,' the MTA set the goal its board members knew it must reach: Rebuild mass transportation for a metropolitan economy facing the needs, and eager to reap the rewards, of the 21st century.

"Funded eventually at $8.5 billion—using state, city, and federal assistance and drawing financing techniques from the private sector—the program became one of the largest public-works reconstruction projects in American history.

"Not surprisingly, some MTA agencies were unprepared for the sheer magnitude of the program, and there were some false starts. But then financial controls were put in place, priorities set for construction projects, personnel hired and trained, purchasing disciplines established, information services computerized. Most important, management was restructured to gain control of the work force.

"Now, in 1986, that first capital program—Phase I of MTA's long-range plan to rebuild the region's transportation net-

Rehabilitated Queens No. 7 trains are running over 90% on time despite rebuilding of NYCTA's Flushing line.

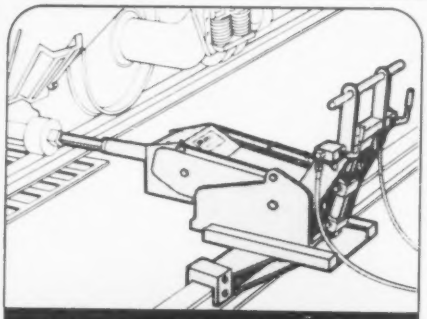
work—is coming to a close. The results are becoming evident, the need to continue is just as clear. Phase II, budgeted at $8.3 billion for 1987-1991, will secure the investment already made and extend to every resident of the region benefits that today are available only to some."

• **The story so far.** NYCTA received nearly $6 billion of the Phase I capital funds. By that time it was clear to MTA management that money alone was not the answer to the underlying problems of the subway system, whose capital plant—estimated to be worth $55 billion on the accounting books—was producing an appalling return on the bottom lines of reliability and rider comfort.

With more than 50,000 employees, NYCTA had only 300 operating managers. The situation was particularly bad in the Track and Structures department, where, according to MTA, a work force of over 5,000 included only 11 managers "who could be hired or fired by the TA's president, and none of these had a college education or professional registration." Amateur hour meant, among other things, that less than one-fourth of the system's track was getting its mandated twice-a-week inspection.

As a measure of how much things have changed, that same department today has 165 line managers and every foot of mainline track is now inspected twice a week. Meanwhile, with Phase I capital money, 60 miles of track a year has been rebuilt. As of September 1986, there had not been a mainline track related derailment in the prior 12 months. Not long ago, derailments were being reported at the rate of one every 18 days.

The new car and car overhaúl program has produced its own quantum jump in reliability. Most of NYCTA's new cars are averaging 50,000 miles between failures—



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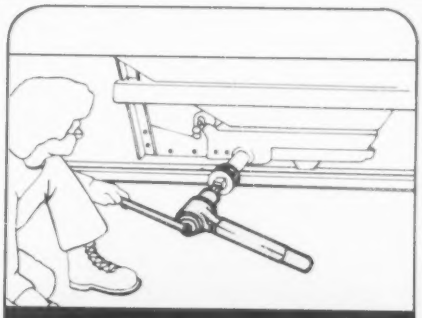

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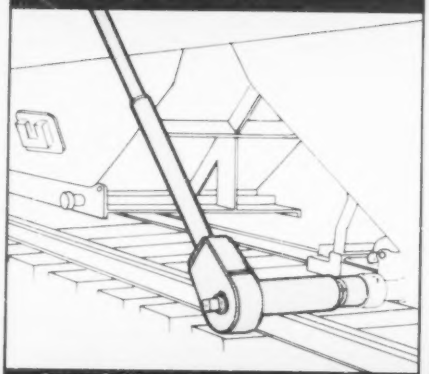

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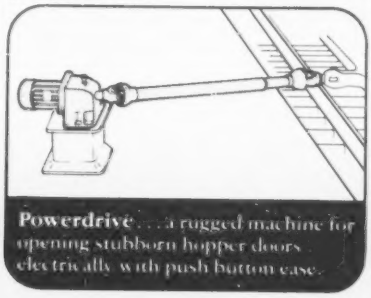
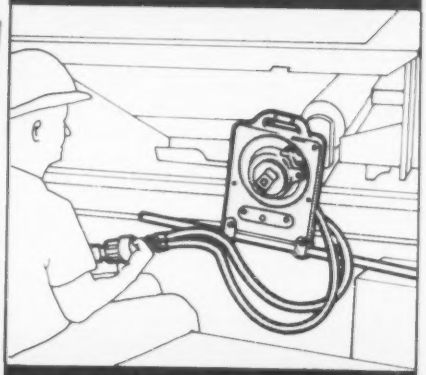


Powerdrive... a rugged machine for opening stubborn hopper doors electrically with push button ease.



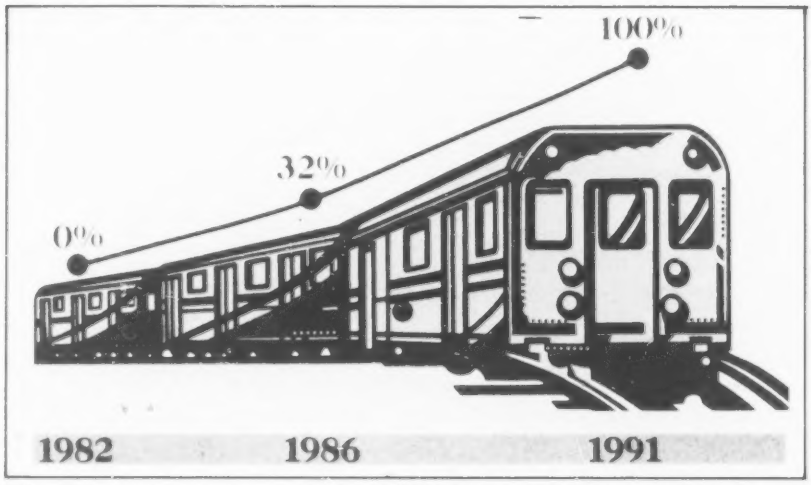
Gate Jack... Air-powered, remote control unit provides responsive, reversible action.

compared with about 10,000 miles for earlier-generation cars.

Graffiti is beginning to disappear from the system. Three years ago virtually every transit car and every subway station were splashed with the graffiti artist's handiwork. As of last month, about half of the fleet of more than 6,000 cars and more than a third of TA's 463 stations were in a graffiti-free program.

The MTA's verdict, as Phase II gets under way: "The decades-long decline of the subway system has been arrested, and the long climb back has begun."

• **Closing a funding gap.** MTA's board formally approved the new, $8.3-billion five-year plan on Oct. 1. MTA Chairman Robert R. Kiley said approximately $5 billion of funding sources had been identified—federal and city contributions; proceeds from the sale of MTA-owned real estate in New York (the Coliseum site and the East Side Airlines Terminal); money from the Westway trade-in; surplus funds from the Municipal Assistance Corporation (M.A.C.); and a small amount of uncommitted money from the 1982-1986 plan. It will be up to the State Legislature to close the $3.3-billion funding gap.



When the new five-year plan ends in 1991, NYCTA's fleet of nearly 6,000 cars will be all-new or rehabilitated.

Said Kiley: "The first real impact of the original five-year plan was felt in 1986, with new cars in service throughout our transit network. The pace of improvements will increase dramatically in the coming years, provided this capital plan proposal is adopted by the State Legislature.

"It would be tragic," he said, "if we abandon our efforts midstream. The gains made by the initial investments would be lost." ■

NEXT MONTH: How the Long Island Rail Road and Metro-North Commuter Railroad plan to invest $1.8 billion over the next five years.

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